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ABSTRACT

The desire to abolish the gap between research theory and classroom practice has sparked an increasing interest in field-based research among science educators. Although most researchers are aware of the standard meanings of informed consent and confidentiality, and there are some codes of ethical principles published by such groups as the American Psychological Association, these codes provide little help with the problems that may arise in field work. Traditional approaches to ethics in research, focusing on the rights of subjects versus the benefits of the research, were written to serve traditional research methods and are inadequate for addressing the dilemmas of field-based research. This paper discusses the relationship between ethics and methodology, commonly used procedures and contractual obligations of social scientists. An approach to ethics that focuses on particular human relationships rather than general principles is suggested. Stressed is the notion that researchers should consider their commitment to the support of science educators and learners when making decisions concerning what to research. (CW)

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# Ethics in Field-based Research: Contractual and Relational Responsibilities

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## Introduction

Ethical decision-making should be a vital part of a research program from the birth of a research question through the publication of findings. All too often these ethical concerns do not surface in the minds of researchers and participants and the values we use in making decisions remain unexamined. Perhaps if we look closely at some of these issues we can avoid being surprised by their occurrence (Thornton, 1986) or having regrets about uncomfortable aspects of our research programs.

My purpose in organizing this discussion of ethics in research is to heighten our awareness about the pervasiveness and importance of ethical considerations in research. Educational researchers ought to be cognizant of the ethical decisions during the design of research and need a conceptual basis for making such decisions. The traditional principles of psychologists, sociologists, and anthropologists have been offerred to guide the decisions researchers make. These principles, however tend to be difficult to interpret and almost useless for solving the dilemmas I have faced in conducting classroom-based research.

Although ethical difficulties are inherent in essentially all research paradigms (Kelman, 1982), in this panel we will focus on those issues most relevant to fieldwork. This paper will critically explore the relationship between ethics and methodology. First, I will examine some of the ethical principles and commonly used procedures, or "contractual obligations" of social scientists. I will suggest that they are

often inadequate for fieldwork utilizing emerging designs and describe alternative principles suggested by fieldworkers that may be more useful. Second, I will suggest that a radically different approach to ethics that focuses on particular human relationships may be more useful than general principles in making ethical decisions in research. These "relational obligations" require that researchers' ethical decisions be based on a commitment to empathize with and support the participants in the research program. Finally, I will suggest that our ethical commitments impact decisions on what to research and that if we commit ourselves to building and supporting a community of science educators and learners, then we should give priority to those research projects that are most likely to achieve this.

## Contractual Obligations

Federal regulations as well as the ethical principles of the American Psychological Association (APA, 1981) are primarily concerned with the contractual obligations of the researcher to the participant. The researcher is presumed to have almost unilateral control over the research and the participant. Knowledge and power are in the hands of the researcher, but not the participant. For example, the following is the APA guideline concerning final disclosure:

> After the data are collected, the investigator provides the participant with information about the nature of the study and attempts to remove any misconceptions that may have arisen. Where scientific or humane values justify delaying or withholding this information, the investigator incurs a special

> responsibility to monitor the research and to ensure that there are no damaging consequences for the participant (APA, 1981).

Although much of educational research today operates within research paradigms in which the researcher seeks control of the research environment (Campbell & Stanley, 1963), this is not true for many field-based methodologies, particularly case-study research. The researcher has little control over the events in the classroom or the participants. Participants have considerably more power than they are often credited for. The researcher is dependent on them for the data and without their trust and cooperation, the research cannot continue. In field work, the participants in the research are equal contributors to the study, although their participation may be of a different nature than that of the researcher.

The language used to create this image of the participant at the mercy of the researcher is, at best, patronizing (Wax, 1977). The teachers I have worked with are bright, highly motivated, articulate individuals. The end of the study also provided them with the opportunity to "remove any misconceptions" I may have had and to present alternative explanations.

The image of the powerful, perhaps even deviant, researcher is quite disturbing. Perhaps it should not be surprising considering the first set of principles were written to address biomedical research and the atrocities that were uncovered in the Nuremburg military tribunals of 1945 (Merriam, 1988). However, in some respects, these codes exacerbate the problem by allowing

researchers to violate certain principles if their methods can be justified as sufficiently beneficial to research. It violates no ethical codes to lie to participants if other alternatives are unavailable (APA, 1981) and the research has the potential of making important contributions to research. Is a double standard appropriate for people carrying out research and people in everyday life? If the public believes that researchers are liars and manipulators, will they, and should they, continue to support and participate in research programs (Bok, 1979)?

Informed Consent

> Except in minimal-risk research, the investigator establishes a clear and fair agreement with research participants, prior to their participation, that clarifies the obligations and responsibilities of each. The investigator has the obligation to honor all promises and commitments included in that agreement. The investigator informs the participants of all aspects of the research that might reasonably be expected to influence willingness to participate and explains all other aspects of the research about which the participants inquire (APA, 1981).

Certainly all responsible researchers would agree that anyone asked to participate in research should be informed of the nature of the study. The issue is not problematic in traditional research (e.g. experimental studies, survey, structured observation) because questions and procedures are known *a priori* and can and should be explained thoroughly to the participant.

However, one of the features of many qualitative designs is that the questions, observations, and theories emerge as the study progresses. It is neither possible nor desirable for the

researcher to determine at the onset what all the questions and procedures will be. Research in the field can never follow a set of rigidly defined procedures; it must always remain flexible.

Not only does the research design unfold during the progress of the research, but the relationships between the participants and the researcher(s) constantly change as well. The participants' understandings and feelings about the research develop as the research progresses.

At the beginning of a study, researchers can discuss tentatively what the issues are they would like to probe, as well as predictions concerning the time commitments that would be needed of the participant. Consent should be obtained at the start of the study, but is not sufficient to address the entire study. Wax (1977) has suggested that in fieldwork, consent must be continually renegotiated, but it is difficult, if not impossible, to formalize. The relationships are delicate and labile and must be nurtured if the research is to continue. Researchers must always be cognizant that ethical responsibilities are not over when initial consent is obtained -- they are just beginning.

Risk-benefit Analysis

Risk-benefit analysis of research involves predicting the probability and severity of harm to the participants in the research and balances this against the potential benefit the research has for the scientific community or for the research

participants. The essential difficulty for the researcher is how to resolve a possible conflict of interest: should s/he act in favor of the participant or in favor of the research? The American Anthropological Association (1971) asserts that the researchers' primary obligations are to the research participants and that their welfare must never be jeopardized regardless of the merits of the research. However, all research involves some degree of risk of harm to the participant and deciding what degree of risk is acceptable is a difficult task.

The problems in attempting to apply this procedure to case study research are similar to the difficulties in obtaining full prior consent. Since the researcher has little control over the context of the study it is difficult to predict what will happen. In fieldwork, the greatest probability of harm occurs with dissemination of the findings and inadvertent violation of confidentiality.

## Confidentiality

> Information obtained about a research participant during the course of an investigation is confidential unless otherwise agreed upon in advance. When the possibility exists that others may obtain access to such information, this possibility, together with the plans for protecting confidentiality, is explained to the participant as part of the procedure for obtaining informed consent (APA, 1981).

In fieldwork, the potential for the most serious harm comes in publication of the findings (Cassell, 1982). Complete confidentiality is difficult to achieve in case-study research

and becomes increasingly more difficult as the numbers of participants and researchers increase. The problem of confidentiality is particularly important in studies in which the teachers may have as many failures as successes in the classroom. Case study researchers should never promise complete confidentiality and should work to fulfill their obligations regarding confidentiality. Participants can also jeopardize their own confidentiality in unpredictable ways. This too should be discussed in the beginning of the study.

At the heart of the issue of confidentiality is the protection of an individual's privacy, which is guarded by the participant to various degrees depending on the values of the individual. In interviews some people value their privacy very highly and may not discuss openly all that you would like to know even if their anonymity is well-protected. Some will talk quite openly whereas others will enjoy the freedom, or even find it therapeutic, to tell what they <u>really</u> think about their school.

All of the principles thus far discussed are intended to be applicable to research of any kind. Perhaps there is a need for procedures that will address the ethical dilemmas peculiar to particular research paradigms. There have been some attempts at achieving this by fieldworkers.

## Alternative Procedures and Principles for Guidance in Fieldwork

Wax (1977) has also argued that a more appropriate procedure for evaluating the adequacy of informed consent procedures in

fieldwork would be an ex post facto assessment of the study. Once during the study and then again after the study, the researchers might submit a report addressing how the study was explained to the participants, if there were people who objected to their presence, what the reasons were for the objections, and how the researchers handled the objections.

Lincoln and Guba (1985) have also suggested that the adequacy of informed consent can only be assessed ex post facto. Their "Principle of No Surprise" suggests that if the participants were adequately informed, they should not be shocked by the nature of the feedback they receive during the study or by the case study written at the conclusion of the study.

Cassell (1982) has suggested that a preferable alternative would be to evaluate fieldwork based on the Kantian principle that people be treated as ends in themselves rather than as means to researchers' ends. Perhaps the ideal is that both researcher and participant should benefit from the research. Increased self-knowledge may bring new insights to teachers concerning their instructional strategies and students concerning their learning strategies. The findings of the research may have direct applicability to the participants' classrooms and its sustained implementation may make profound improvements in the teaching and learning.

The problem with these suggestions is that although they may be effective in evaluating research or judging the ethical standards of the researcher after the fact, they do not provide

much help for the conscientious researcher during the progress of the research.

The problem with principles and procedures in general is that they do not allow enough flexibility and are difficult to apply to concrete situations. They certainly cannot be applied uniformly. My experience is that different individuals will react in diverse ways to identical informed consent or final disclosure procedures. One participant may be very enthusiastic about the research and immediately comfortable with the researcher. Another may not be comfortable and want more information, but is too timid to ask. Whereas one teacher may be untroubled by limited feedback early in the study, another may be uneasy with the same situation. Procedures and contractual obligations do not address the diversity in these very important human needs.

## Relational Approaches to Ethical Decisions

Whereas traditional work in ethics has searched for justification of actions based on universal principles, others (Noddings, 1984; Gilligan, 1982) have suggested that an equally viable approach to ethics rests on concern for human relationships in a particular context. The ethical ideal is a commitment to human caring, rather than reliance on statements of principle.

> A relational ethic remains tightly tied to experience because all its deliberations focus on the human beings involved in the situation under consideration and their relations to each other (Noddings, 1988, p. 218).

> Laws, manifestos, and proclamations are not, on this account, either empty or useless; but they are limited, and they may support immoral as well as moral actions. Only the individual can be truly called to ethical behavior, and the individual can never give way to encapsulated moral guides, although she may safely accept them in ordinary, untroubled times (Noddings, 1984, p. 103).

Case-study research methodology operates on the premise that our understandings of teaching and learning are bound to the context in which they take place. It would be consistent with this research paradigm to also suggest that the ethical decisions that are made are closely tied to the particulars of the situation at hand.

> Unlike other research relationships, few aspects of interaction are placed outside the fieldwork paradigm; instead, the paradigm is based upon human interaction in all its richness, variety, and contradiction. In consequence, it is frequently difficult to separate the human relationship from the research relationship; the role and the persona of the fieldworker are linked (Cassell, 1982).

Because case study researchers spend so much time with the participants in their research and often feel tremendous empathy with them, an ethic based in human relations and particular situations is quite compelling. It makes sense to us as human beings primarily because we care for the individuals in our research programs. Additionally, since our research is dependent on the trust in human relationships that is developed throughout the study, focusing our efforts on nurturing the vital relationships between participants and researchers also strengthens the validity of the research.

Perhaps an illustration of how this approach to ethics could serve as a conceptual aid in making decisions would be helpful. In planning a research program, I struggled with the decision of whether to include a particular teacher because I believed the teacher would provide a needed perspective to the study. However, I had spent enough time in his classroom prior to the study that I knew there would be many things there I would find disagreeable. In fact, I was unsure that I could even care for him as a person. Meeting my contractual obligations to this teacher would not have been difficult. But what about my ethical relational obligations that require me to build a supportive, caring relationship? As it turned out, this teacher was a remarkably receptive and open person. As the research progressed and I began to understand the teacher's motivations and understandings, it became easier to empathize with his struggles. Professionally, I still disagree with this teacher's solutions to classroom difficulties, but my respect for him was considerably enhanced by the affiliation. However, if the teacher had not been so receptive and I had been so uncaring that we were unable to create an empathetic relationship, then perhaps the best decision would have been to stop the research.

## Traditional Research Methods and Relational Ethics

I have argued that an ethic based on principles does not fit well with many research methodologies, such as case-study research, and that a relational approach is more useful.

However, if a mismatch exists between ethics of principle and case study methodology, is there a similar incongruence between relational ethics and some traditional research methods (e.g. experimental, survey, structured observation)?

The goal of these methods is to create laws and theories that may be generalized to other places and times. The knowledge generated is intended to transcend its context and the peculiarities of the participants. Methodologies committed to generalizable knowledge and ethics dependent on contextual understanding may not fit together well.

Certainly the vast majority of traditional educational research would easily comply to accepted ethical principles. But if we embrace an ethic based on relationships, how do we deal with research in which there are few or no human relationships formed? Subjects generate data, but there is no human connection. Furthermore, is there a danger that researchers will forget the humanity of the sources of their data and treat their participants as interchangeable parts of a machine? Let me illustrate with what I consider an extreme and frightening example found in an textbook designed as an introduction to educational research for graduate students. This is a procedure called "implied consent" proposed by J. E. Atwell (1981).

> To do this, a sample drawn from the population to be studied is fully informed on every aspect of the proposed research. If the individuals in the sample agree by a large majority to be subjects in the study, the researcher can assume that other persons from the same population would also agree. He then selects subjects from this population, but does not seek

informed consent from the actual subjects (Borg & Gall, 1983, ch.4).

This procedure assumes that one group of people can give consent for another group. The author has lost sight of the fact that these "samples" consist of cognizant human beings rather than cards that can be shuffled and distributed for the purpose of research. This procedure is not questioned by the authors of the textbook, thereby giving the impression that it is an acceptable alternative.

Bannister (1981) has criticized researchers for depicting themselves as purposive and pensive and their subjects as mechanical and mindless. In reports researchers represent (or perhaps misrepresent) their own thinking by describing a logical sequence between the research question, the methodology, the analysis, and the conclusions. They then describe their subjects by a list of overt behaviors or a set of errors. These subjects have reasons for their actions that are often not explored by the researcher and their "errors" may have sensible origins. Bannister (1981) suggests that the subjects may be more successful at making sense of the researcher than the researcher is at making sense of the subjects. Such disparate portrayals of researchers and participants are unlikely to enhance the relationships between them.

## Reaching for the Ideal:

## A Community of Science Educators and Learners

Our commitment to ethical standards and ideals affects not only how we conduct and report our research, but also how we set priorities on what we research (Nader, 1976). The messy world of field-based research is often undertaken because of an ethical commitment on the part of the researcher to understanding and improving real classrooms. The decision of whether to conduct research that has implications for educating an elite group of students but not disadvantaged groups is based on the researcher's ethics. Our literature is full of studies of gender and race that examine the deficiencies of minorities and women in meeting the standards of success as defined by a society that has historically excluded minorities and women in the construction of the standards by which they are measured. In contrast to this research that often serves to explain and preserve existing inequities, there are others who have committed themselves to action research projects in which the sole purpose of the programs is to break down those barriers that have prevented the equal participation of minority groups and women (Roman & Apple, 1988; Sanford, 1981).

My concern is not only for the individuals involved in particular research programs, but also for the community of science teachers, students, and researchers. It is widely believed that the research efforts of science educators have had little impact on classroom practice (Casanova, 1989;

Fenstermacher, 1986). The relationship between research and practice has been a fragile one. Perhaps we can blame this on science teachers for failing to keep up with the research literature. Another possibility, however, is that problem lies in the research that it is being done (Kyle & Shymansky, 1988; Sergiovanni, 1987). It is often so narrow in scope that it has little or no application to the classroom. Sometimes the agendas of teachers and researchers are so disparate that they are not even interested in the same problems. Kyle and Shymansky (1988) have proposed that one solution to this problem is for teachers to become researchers in their own classrooms.

Collaborative research projects have been suggested as valuable ways for teachers and researchers to work together on solving classroom problems. However, if we are to encourage such projects we need to consider the different pressures under which teachers and researchers currently operate.

> While the teacher is under pressure to be efficient and effective, the academic researcher is under pressure to discover new theories and to produce publishable articles. The kind of research teachers want and the questions they would like answered may be of interest to the researcher, but they may also be tainted in academic circles as too "applied" and, therefore may not lead to academic advancement. In addition, academically valued writing must be "scholarly" - that is, it must be written in the specialized jargon of the researcher ... Research results must be published in the "right" journals if they are to count in obtaining desirable academic rewards. Publication in the magazines most teachers read is not highly valued in academy (Casanova, 1989, p. 46).

Noddings (1988) has suggested that we should concentrate our efforts on research <u>for</u> teaching, which would include research

about the actual needs and experiences of teachers and students. Rather than focussing exclusively on their deficiencies, the emphasis would be on what they need to succeed.

The ethical ideal of nurturing the relationships of researchers and teachers does not mean that we must limit our research to exemplary teachers. There are many struggling teachers who would welcome researchers in their classrooms and could benefit from them. However classroom failures should be reported with sensitivity and the reasons for the difficulties probed thoroughly. Contextual constraints such as the teacher's isolation from other professionals, preparation, materials, and pressure to conform to state mandates may play important roles in influencing what teachers do.

My only apprehension in arguing for an ethic based not only on principles, but also on care, is that the ideal will be tough to obtain. There will likely be times when I will fail in my attempts to fulfill all my obligations to the people involved in research efforts. Nevertheless, in striving to reach the ideal we can strengthen the bonds between students, teachers, and researchers, perhaps achieving research that is informed by practice, and practice that is informed by research.

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